**SMART WATER MANAGEMENT**

**INTRODUCTION:-**

Water Level Monitoring System in Water Tanks can be used in Houses to avoid overflow and wastage of water. In this project, one of the important parts is the High Sensitivity Water Sensor. It is easy to use, light in weight, compact in size, high identification, and detection of water, droplets.

The water sensor has many different applications like sensing of rainfall, leakage of water and water level detection. This sensor works by having a series of exposed mark lines(yellow lines that can be seen in the image above) connected to GND. The sensor has a low resistance resistor. The resistor keeps the sensor value low till the water shorts the sensor.

This sensor then changes the water detected to analog signal/ digital signal with the help of Bolt IOT, and those analog values are used in the program, to achieve the function of water level monitoring and other similar applications. The good point of this sensor is that it uses very less power and has higher sensitivity.

Pin definition:

"S" stand for signal input

"+" stand for power supply

"-" stand for GND

Program:

**import requests, time, math, json from boltiot import Bolt import conf2 as conf File**

**#my Configuration**

**data = []**

**#Empty list for storing**

**sensor values... mybolt = Bolt (conf.bolt\_api\_key,**

**conf.device\_id) #My Bolt mybolt.digitalWrite(0, "LOW")**

**#Function: Get Sensor Value**

**def get\_sv(pin):**

**try:**

**response =**

**mybolt.analogRead(pin)**

**data json. Loads(response) = if data["success"]!=1:**

**print("Rquest**

**Failed")**

**print("Response:", data)**

**return -999 sensor\_value = int(data["value"])**

**return sensor\_value except Exception as e:**

**print("Something went wrong")**

**print(e)**

**return -999**

**#Function: Send Telegram Message def send\_tm(message):**

**url =**

**"https://api.telegram.org/"+conf.telegram\_bot \_id+"/sendMessage"**

**data = {**

**"chat\_id": conf.telegram\_chat\_id,**

**}**

**Try:**

**Response=requests.request( “POST”, url, params = data**

**) print(“This is the telegram**

**Print (response.text)**

**Response=>”)**

**Json.loads(response.text)**

**Return telegram\_data[“ok”]**

**Except Exception as e:**

**Print(“Errror Occurred in**

**Telegram\_data =**

**Sending the alert message”)**

**Print€**

**Return False**

**#MAIN: -> while True:**

**Sensor\_value = get\_sv(“AO”) print(“Sensor value is =**

**, sensor\_value) if sensor\_value == -999:**

**Print(“Request unsuccessful. Skipping…”) time.sleep(10) continue**

**If(sensor\_value = conf. threshold): print(“Alert: Water Level**

**Exceeded the threshold value”) message = “Alert (Type 1)!Water Level exceeded. Time to Stop filling**

**The tank” +**

**“The current sensor value is: “+str (sensor\_value) telegram\_status =**

**Send\_tm(message)**

**print("This is the telegram status: ", telegram\_status)**

**mybolt.digitalwrite(0, "HIGH") time.sleep(60)**

**mybolt.digitalWrite(0, "LOW")**

**else:**

**mybolt.digitalwrite(0, "LOW")**

**data.append(sensor\_value) time.sleep(10)**